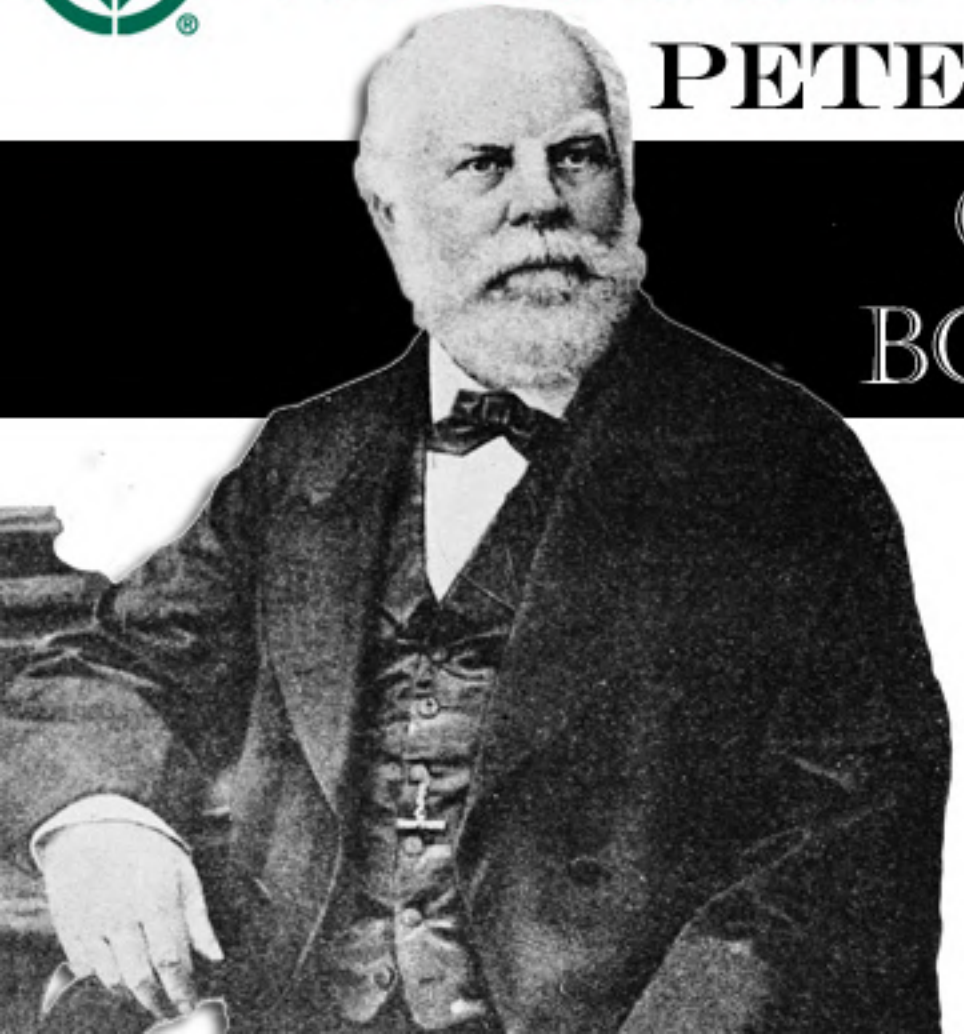
Missouri Botanical Garden

Peter H. Raven Library

George Engelmann Botanical Notebooks



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

1332

Echinocactus

I Theloidei — globose, ellipsoidal or clavate; tubercles distinct
berries scaly & hairy — sp. 1–10

1. tubercles spiral — sp. 1–3
2. tubercles in vertical rows — sp 4–10

II Hybogoni — globose or cylindrical; 7–18 ribs, tuberculated
berries scaly & hairy — sp. 11–21

1. tubercles broad — sp. 11–14
2. tubercles compressed — sp. 15–21

III Microgoni — globose or cylindrical; ribs compressed often undulate
areolae approximate
berries scaly & hairy — sp. 22–31

1. areolae immersed — sp. 22–28
2. areolae protruding — sp. 29–31

IV Stenogoni — globose or obovate, ribs much compressed, undulate
berries scaly & hairy — sp. 32–49

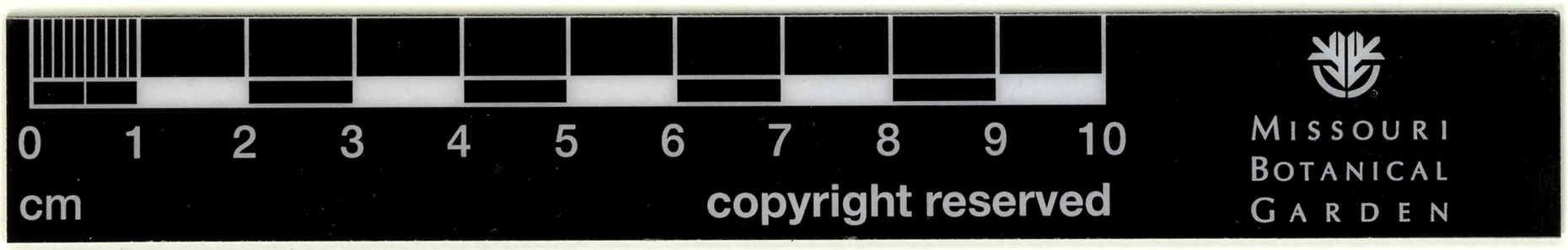
1. ribs knife blade like — sp. 32–48
2. ribs thicker — sp. 49.

V. Macrogoni — globose often very large; vertex woolly
berries scaly & hairy — sp. 50–76

1. central spines hooked — sp. 50–57
2 spines straight or slightly curved — sp. 58–76
spines annulated — sp. 58–67
spines smooth ish — sp. 68–76

VI Asteroidei — no spines — 77

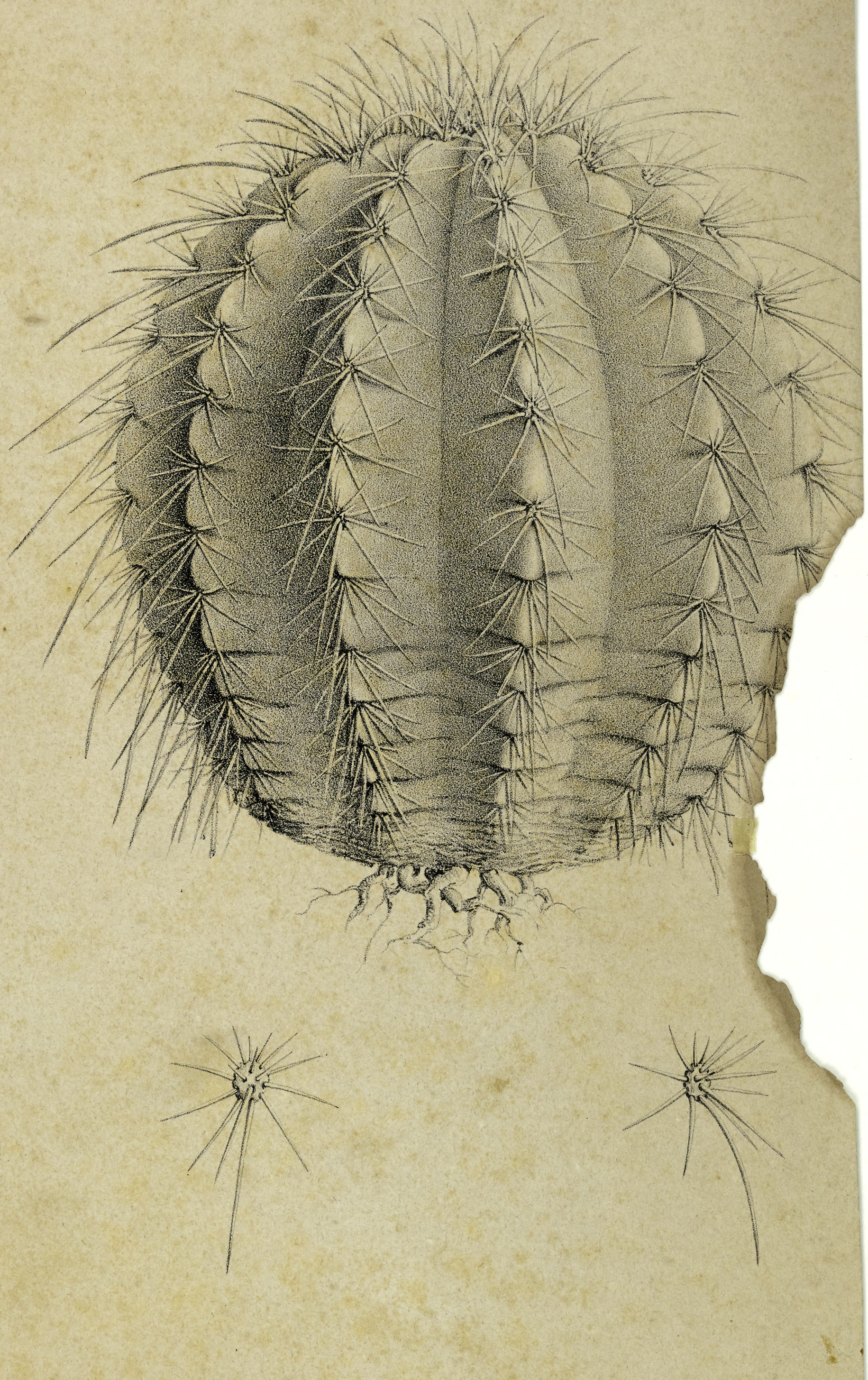
VII. Gymnocarpi — globose, depressed, rarely cylindrical; vertex
often with long wool; berries round, smooth;
& yellow (fragrant?) — sp. 78–86



Missouri Botanical Garden
George Engelmann Papers

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
Missouri Botanical Garden

1333



Malacocarpus

Echinocactus aciculatus *Salm.*

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

you a little gift of any kind that may be agreeable. Will you have a five-pound note, or a watch, or a suit of clothes?"

William did not "beat about the bush:" he gave his mind "right off the reel" for a suit of clothes, saying he and his missus would like to be married, and his idea of happiness was to be possessed for the happy day of a green plush coat, a red plush vest, corduroy trousers, and a white hat. At this point of the story we feel bound to cry "Hooray for William Heap!" better known at Middleton as Billie Yep.

The gorgeous costume was, of course, provided, and William wore them once as a kind of dress rehearsal preparatory to being married to his missus. And to complete his "tog out" he mounted a bright blue necktie, and finished off below with patent boots. Unlike gentlemen who wear purple and fine linen every day, William carried his old suit with him in a convenient bundle, and in due time appeared as a bird of finest feather on the railway platform of his native town. Alas! the penalties of notoriety for those who are not used to it! He was partly lionised and partly mobbed. The pressure of mingled admiration, sarcasm, and playful chaff, was too much for his serious head, and he took refuge in a very hospitable public-house, hearing, to his dismay, the chorus of the mob, "Hooray for Billie Yep!"

And the truth must be told, he came forth a merrier and not a wiser man. In fact, he came forth in the careful custody of a guardian of the peace, minus his white hat, his bright blue necktie all awry, and the lustre of the new plush dimmed a little. But fate fashioned a dramatic unity of his adventures. He had to appear before Mr. Justice Barlow, and he pleaded that "them cott'n handkerchers" had done it, and the tender-hearted magistrate inflicted a fine, and at the same time paid it. Thus the curtain falls on the story of the English Cotton crop, and we return to the grave question: Did it pay? The story proves that it paid well, ay, a thousandfold. All the actors in the little drama played out their parts, and were satisfied with results, for even Billie was none the worse in the end for his ready refuge from the pressure of public admiration. And when fadding people work out their fads they have their wages and are satisfied. And besides, to judge the case by material results, Mr. Mendel still possesses a dozen beautiful handkerchiefs manufactured from his own English-grown Cotton. (From the Christmas Number of the *Gardeners' Magazine*, which contains a capital portrait of Mr. Petch, and also one of "Billie Yep.")

BULBOUS PLANTS FOR POTS.

FOREMOST in value for pot cultivation are the Japanese Lilies, than which a finer class of plants are not in existence, and if the Rose had not been dubbed the queen of flowers that titular honour must of right have belonged to the Lily, for nothing can be more regal in the floral world than L. auratum, with its stately stems and magnificent blooms, so exquisitely marked and so deliciously scented. Then again there is L. candidum, unrivalled for its snowy white, and the spotless purity of its petals, and the lancifolium section, all of which are chaste and exquisitely beautiful in their soft colour and finish. For growing in pots the above-mentioned Lilies are invaluable, and the more so that they can be grown by any one having only a pit or frame, as all they require is simply shelter, not so much from frost as rain, too much of which saturates the soil, injures the roots, and often causes the bulbs to suffer and rot. To obviate these evils drainage is of the first importance, and to ensure this being free and open the crocks should be carefully placed in the bottom of the pots intended to receive them, and then covered thinly over with moss. This will prevent the soil running or working down among the interstices, and thus ensure a free and quick passage for the water, which then moistens the ball and leaves it sweet and wholesome for the fibres to feed on.

In the shifting of Lilies from one pot to another much dexterity and skill are needed in handling, as great damage may soon be done by bruising or breaking the roots, which, when at all advanced, are clear and all ready to go into a size larger pot. In putting them in it is necessary to keep them low down, so as to leave room for top-dressing when the Lily stems are high, as then they form feeders around the base, and it is a great help to the plants if these have nice sods they can lay hold of to help them in the work of unfolding and perfecting their flowers. The soil that suits Lilies best is very turfy loam and peat in about equal parts, and this mixture should be used somewhat rough, and not pressed down over-firm. When potted the proper situation for Lilies is a cold pit or frame, where they can be stood on a hard coal-ash bottom impervious to worms, which, if they get into the pots work sad mischief by getting among the scales and piercing and eating the bulbs. If any danger of these creatures entering is apprehended it is a good plan to stand the pots on slates, as then the way is blocked, and they are effectually shut out. If the soil at the time of potting is moderately moist, as it should be, no water will be required till the young shoots appear, and after that for some time on till growth becomes more active it is necessary to administer it with caution, as the plants take little up till they have a fair length of stem and plenty of leafage. To keep them dwarf and sturdy the lights should be tilted whenever the weather is sufficiently mild and favourable, and on sunny warm days it is advisable to take them off altogether, which will gradually harden the plants and fit them for standing out in the open. This they will safely do by the end of May if a sheltered situation be chosen, and they have a mat or a few evergreen branches laid on rails above them by night, as frost is apt to nip the young tender tops. If any are wanted early they may be slowly brought on under glass, but Lilies are impatient of heat, and do not bear forcing, although L. auratum will stand more of it than most others, but with warmth they must always have plenty of air, or they become etiolated and weak.

During summer, and up to the period of flowering, Lilies are greatly benefited by liquid manure, which, however, should not be given strong, but clear, weak, and often, as then there is no fear of injuring the delicate rootlets, the tips of which soon suffer if they come in contact with powerful stimulants. Next in importance to growing Lilies is the caring for them after they have done blooming—a time when they should be stood out, and have the balls kept just moist by occasional watering till the plants go quietly and naturally to rest, when the stems may be cut away, and the pots turned on their sides till they are taken in for the winter ready for the re-potting again.

Next in point of merit to Lilies for pot culture are Gladiolus, which, dropped in among other plants on a stage so as t stand with their heads clear out, are grand and striking, especially those of the gandavensis section, which have tall, noble spikes, and afford great variety in colour. The different varieties of ramosus, though not so showy, are equally useful, as they come in much earlier, have neat, beautifully marked blooms, and are very valuable for cutting, as the spikes, being small, are just the thing for vases, and the flowers continue to open, and last long in water. The bulbs of the first-mentioned being large, and the plants strong, should be potted one in a pot, the most suitable size being 7-inch, which is quite large enough to hold six of the ramosus kind, and afford the roots plenty of room. The most suitable soil for Gladiolus is one similar to that recommended for Lilies, and in potting it is a good plan to give each bulb a pinch of sand, which helps very materially in keeping them in a sound, healthy condition. February or March is quite time enough to pot the late flowering sorts, but the early kinds should be potted at once and stood in a cold frame where they can come slowly on.

Tritonia aurea is quite unique in its way, and contrasts well with the brilliant Gladiolus, with which it helps to make a fine show in the autumn. To have fine pots of this Tritonia store pots should be at once shaken out and the largest bulbs selected, a dozen or so of which will be enough to place in an 8-inch pot, and about half that number in one that is smaller. The same treatment that is requisite [illegible] when they commence considerably early in spring. Why many fail with these is in giving them heat, which they will not stand, and, therefore, any attempt at forcing is sure to bring them up weak and spoil them for blooming. Where they do best is on shelves at the back of pits, or in houses where they can be stood up near the glass and have plenty of air, and when growing freely or flowering they require plenty of water and an occasional soaking of liquid manure. Lachenalias require a light, rich, sandy soil, and to be kept growing on for a time after they have done blooming, that the bulbs may reach their full size, when they should be allowed to ripen off gradually, and then kept dry till the autumn—a season when they need re-potting again. *J. S.*

CLYFFE HALL, WILTS.

CLYFFE HALL, Market Lavington, Wilts, the residence of the Hon. Mrs. Hay, is a small but very pleasant and conveniently situated estate, lying some six miles from Devizes, and near to what was once the thriving town of Market Lavington, so called as being a market centre, and to distinguish it from West Lavington. Market Lavington is not so important a place as it was formerly, but it is large enough to almost rank as a small town, and not a great distance from the commencement in that district of the famed Salisbury Plain.

The house is close to the road from Devizes to Lavington, and there is a belt of fine trees screening it from the highway. The mansion belongs to the Radnor family, and it bears date about 1750. It is a good square building of the Italian order of architecture, and stands in somewhat restricted though pleasant pleasure grounds. The gardens, gardener's residence, and homestead, are all contiguous; and Mr. James Lye, the well-known Fuchsia raiser and exhibitor, is both gardener and steward. In the grounds are very fine examples of Limes, Beech, Scotch Fir, Oak, and Elm, the last two very fine; Horse Chestnut, &c. A portion of the park, perhaps the best part of it, is situated on the other side of the public highroad from the mansion, close to the Manor House, which is in the occupation of the Right Hon. E. P. Bouverie. The pleasure-grounds are small, but there are a few good coniferous plants dotted about on the lawns, also a fine specimen or two of the evergreen Oak. On the left of the drive is a raised border against one of the walls of the kitchen garden, containing a good assortment of hardy plants and annuals, of a bright and effective character. Behind the plants is a line of trained Plum and other fruit trees. There is an old-fashioned flower garden in front of the mansion, which Mr. Lye keeps very gay with bedding plants; and there are pretty creeping and other plants against the verandah to the house. It is a charming spot, quiet, secluded, and peaceful, full of the beauties of the country which abound on every hand.

The kitchen garden is on the right of the mansion, and is enclosed with walls on the east, south, and west sides; buildings on the homestead making up the northern boundary line. Pears, Plums, Cherries, and Apricots, do well on the walls, but not Peaches and Nectarines. There is a small Peach-house in which some good fruit is produced; and a good lean-to plant-house, in which Mr. Lye grows his fine specimen Fuchsias, Petunias, zonal Pelargoniums, &c. The kitchen garden is well cultivated, and good crops of several kinds of vegetables are found therein. As a raiser and cultivator of Potatos, Mr. Lye is already known, his Favourite and Wiltshire Snowflake being leading exhibition kinds; the last named is an excellent main-crop variety of the Victoria type. Several seedlings are being grown, and they are of a decidedly promising character; one, named Paragon, the result of a cross between Peach Blow and Red Emperor, is a round variety, with a red skin banded with white, handsome in appearance, early, of a dwarf habit of growth, and a good cropper. Wiltshire Giant is a fine looking red kidney, raised between Bountiful and Late Rose, but with the rich colour of the former parent, white flesh, large, good cropper and quality.

0517-327

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

nearly all their family, and but for the severity of the weather the third generation of grandchildren could also have been numerously represented. One of their sons journeyed from Gothenburg, in Sweden, to be present, and in presenting a handsome timepiece, the gift of the family, their eldest son, Mr. PETER LONEY, Jun., from Marchmont, made a few appropriate remarks, expressing congratulations for the present happiness, and good wishes for the future welfare, of the couple now enjoying the jubilee of their married life. Mr. PETER LONEY, Sen., who has been gardener at Fingask for the last forty-four years, is widely known in the Carse of Gowrie district for his urbanity of manner to all visitors to the gardens and grounds, which were laid out by the late Sir PATRICK MURRAY THRIEPLAND in the ancient style, which Mr. LONEY, from his activity and zeal, is still enabled, through the trustees for the young heir to the estate, to maintain in all their pristine beauty. Those employed in the gardens raised a large bonfire in honour of the aged and respected couple.

—— CEYLON PRODUCTS.—"Cingalese" writes :—"Coffee crops here are smaller than ever, but Cinchona is paying well, and Cacao will soon pay still better. Tea will soon be a very good export from Ceylon ; indeed, I believe Ceylon Tea to be the best in the world. An immense acreage is being planted, so that in spite of Hemileia there is a bright future for this country."

—— THE WEATHER.—General remarks on the temperature, rainfall, and duration of bright sunshine, for agricultural and sanitary purposes, during the week ending Dec. 18, issued by the Meteorological Office, London :—The weather has been generally fine in the north of Scotland and moderately so in Ireland, but gloomy in all other parts of the country. In many places fog or mist has prevailed, and in the south-west of England some heavy falls of rain have been experienced. The temperature has varied greatly in different districts and on different days, but, on the whole, has been below the mean in all districts except "England, S." In England the thermometer was lowest on the first day of the period, when it fell to 10° in the Midland Counties and from 15° to 20° elsewhere. Over Ireland and Scotland the minima were registered on the 15th, in the former country they varied from 10° to 13°, while in Scotland the unusually low point of 6° was reached. During the latter part of the 15th the temperature rose very rapidly in the northern and western parts of the kingdom, and for the last few days of the period maxima varying from 46° to 49° were recorded in Scotland, while in most parts of England and in Ireland the thermometer rose to between 49° and 52°. The rainfall has been more than the mean in "Scotland, E." and "England, S.W.," but less in all other districts. Bright sunshine has been exceedingly deficient at nearly all stations. In "Ireland, S." 21 per cent. has been recorded, and in "Scotland, E." 18 per cent., but elsewhere the percentages ranged from 8 in "Scotland, W." to 0 in "England, N.E." Depressions observed :—Pressure during this period was generally highest over Scandinavia and lowest in the south-west and western parts of our area. Several depressions approached our west and south-west coasts, but none of importance travelled across our islands. The wind was consequently south-easterly or easterly in direction, and occasionally blew freshly or strongly in the extreme west and south-west. Over central and south-easterly Englane the wind was very light and at times sank to a calm. On the north and east coast of Scotland a fresh south-easterly gale was experienced for a few hours on the 17th.

—— GARDENING APPOINTMENTS. —- Mr. H. BIRCH, for five years Foreman to Mr. BARHAM, at Croxteth Hall, Liverpool, as Gardener to Baron FERDINAND DE ROTHSCHILD, at Waddesden Manor, Bucks.—Mr. JAMES TAYLOR, late Foreman to Mr. DENNING, at Londesborough Lodge, Norbiton, as Gardener to the Duchess of MONTROSE, at Sefton Lodge, Newmarket.

Cotton required by the Lancashire manufacturers began to decline, in consequence of the secession from the Union of the Southern States. In less than a year the supply had ceased, and Lancashire operatives were reduced to terrible straits. The public mind was thereby quickened on the subject of Cotton cultivation, and the discovery of substitutes for Cotton. It may be said that, as regards the proposed cultivation, as well as the desiderated substitute, we are now in precisely the same position as in the days immediately antecedent to the Cotton famine. We do not feed the Lancashire mills with home-grown Cotton, and we have not discovered a substitute for this peculiarly cheap and useful fibre. But for all that, some pretty crops of Cotton have been grown in this country, and the matter is of sufficient interest to justify a brief discourse in the way of narrative.

The latest experiment in Cotton cultivation was successful in every respect. The English-grown Cotton was of the very finest quality, and instead of being consigned to a glass case, with a label attached, to perish amid dust and be soon forgotten, it was consigned to a manufacturer eminent in the Cotton world. Thence it passed through certain needful stages of applied industry, and came forth as a manufactured article adapted for the common wants of mankind. The question will occur as a common pendant to this statement, Did it pay? Well, we may as well say at once that it did pay; but it may be well to add a word on that part of the subject when we have told the simple story we have now in mind.

In the year 1879 Mr. Sam Mendel was enjoying rural felicity in his princely residence, Manley Hall, near Manchester. His gardens were then as famous as any in the country, and his head gardener, Mr. J. R. Petch, being in his full confidence, and having ample horticultural resources at command, was not the man to be alarmed at a proposal to grow a crop of Cotton. Through an accident that is of no consequence whatever, Mr. Mendel became possessed of a fine pod of Sea Island Cotton, and he thought it a pity to lose the opportunity thus afforded for a bit of toy gardening, such as we are given to exalt by describing it as an experiment. Unfolding his views to Mr. Petch, the determination was arrived at to raise a crop of Cotton from this particular pod. It was the gardener's duty to carry the proposal into practice, and it was no less his delight to embark in the "fad" and hope thereby to gratify Mr. Mendel.

The seed was sown, the plants soon appeared, and having all they needed of heat, moisture, and a kindly soil, they soon became giants of their kind, and made showy specimens in 10-inch pots. The finishing touch in the way of cultivation was given by ranging them in a span-roof Melon-house, and training them to the wires. The result was an abundant bloom and a fine crop, the quality of the Cotton being perfect, and its total weight 12 oz.

Then came the dread question, What will he do with it? But this question troubled the gardener much more than the proprietor, who perhaps by that time had forgotten that he was the owner of a thriving Cotton plantation, and that his manager had harvested a crop that may be described as the finest ever seen. What will he do with it? Petch was in the position of the artist as described by Margaret Fuller :

"If he but sees the half that he must do.
Well may he shade his eyes from the far-reaching view."

But a man of business does not waste his days in dreaming because, forsooth, he has lost his sleep through restless cogitations. Mr. Petch carried his twelve ounces of home-grown Cotton to Mr. Charles Ashworth, who knows all about Cotton, and he said if he could have twelve tons or even twelve hundredweight of such quality he would be able to surprise the world with something unique in the way of manufacture. But twelve ounces, ha! But the practical planter was as ready with his wit now as with his hands aforetime, and mildly muttered "pocket handkerchiefs." The manufacturer being made of inflammable stuff, and the word uttered being full of fire, there followed a moral conflagration. When the

But cotton yarn is not a cotton cloth, and the best intentions will not pave any place with cotton handkerchiefs. There still hung in the sky where this Cotton was concealed the perplexing question, What will he do with it? This question came home to Petch once more, and after another restless night a flash of inspiration directed all his thoughts to Middleton. You may not know the place that bears so ambiguous a name. There is a Middleburg in the heart of Zeeland, and a Middlesex somewhere in the suburbs of London ; and as for a Middleton, you may find it anywhere in some form all over the world. But this Middleton is a sort of suburb of Manchester, inhabited for the most part by a very peculiar race, who live at the loom and see nothing but work, work, looming in the future. They are usually regarded as descendants of the persecuted Protestant artisans who fled to this country to save their necks from the halter and their children from infamy, in days when the kings of France and Spain were defenders of the faith under the immediate patronage of the devil. They may be of the Huguenot race, and they may not be. They are industrious, peaceable, given to fads and fancies ; lovers of flowers, pigeons, dogs, rabbits, and singing birds ; their sense of humour is local and exclusive : to the casual man of the world they appear bigoted and serious beyond all other example. But in Middleton the textile, as distinguished from Middleton the stony, or Middleton the muddy, there may be found talent in weaving, and to Middleton the textile did Petch, the Cotton planter, go. And who should he go to but to Mr. Samuel Barlow, J.P., a master of the dialect, a master of the arts and industries, and a trusted gentleman, respected all around, a proper referee on any proper subject.

And so the cotton crop was carried to Stake Hill, and Mr. Barlow became involved in the responsibilities, and heard a voice that said, "What will he do with it?"

Then came a flash of inspiration to the new bearer of the new burden. Said Mr. Barlow, "I know of but one man in the world who can work up this 12-oz. parcel of English-grown Cotton. That man is William Heap, a silk weaver, ingenious beyond the average, and as serious and trustful as all around. We will have William here, and hear what he has to say about it."

And William came ; an earnest, quiet, serious man, with a touch of suppressed humour that pervaded not his face only, but his whole frame from top to toe. Said Mr. Barlow to the sweet William, "I have a job here that I think is full of difficulty. Here are twelve ounces of English-grown Cotton of remarkably fine quality, and we must make something of it, William. Now, if you cannot do it, I think no man in England can ; what do you say to try, William?" The serious weaver was more apt with threads than words, and he replied—

"That is reight, master ; I'll try my hand, but I'll know fust what arm to do."

The business was explained, and a handkerchief of a special make was procured, and the good old weaver set to work. But the job perplexed him, as it might any man who had for half a century fingered silk only, going round and round in a groove like a mill-horse darkened by blinkers. Yes, he, too, had his nights of tossing and his days of woe, and the voice cried in his ears, "What will he do with it?"

But he made the handkerchiefs, and they were as like the pattern as if an inspired Chinaman had been entrusted with the job. Mr. Mendel's monogram was cleverly worked in by the weaver : not a thread was employed that did not belong to the original parcel, and the bleaching and finishing were generously superintended by Mr. Barlow.

And when all was done there remained some small samples of the same Cotton in the pod, in the cop, and in a partly manufactured state for museum purposes, while a box of tasteful design was prepared to receive the handkerchiefs. Of their production up to this time Mr. Mendel knew nothing ; but when he entered his breakfast-room on his birthday the box was on the table, and great was his delight to be thus

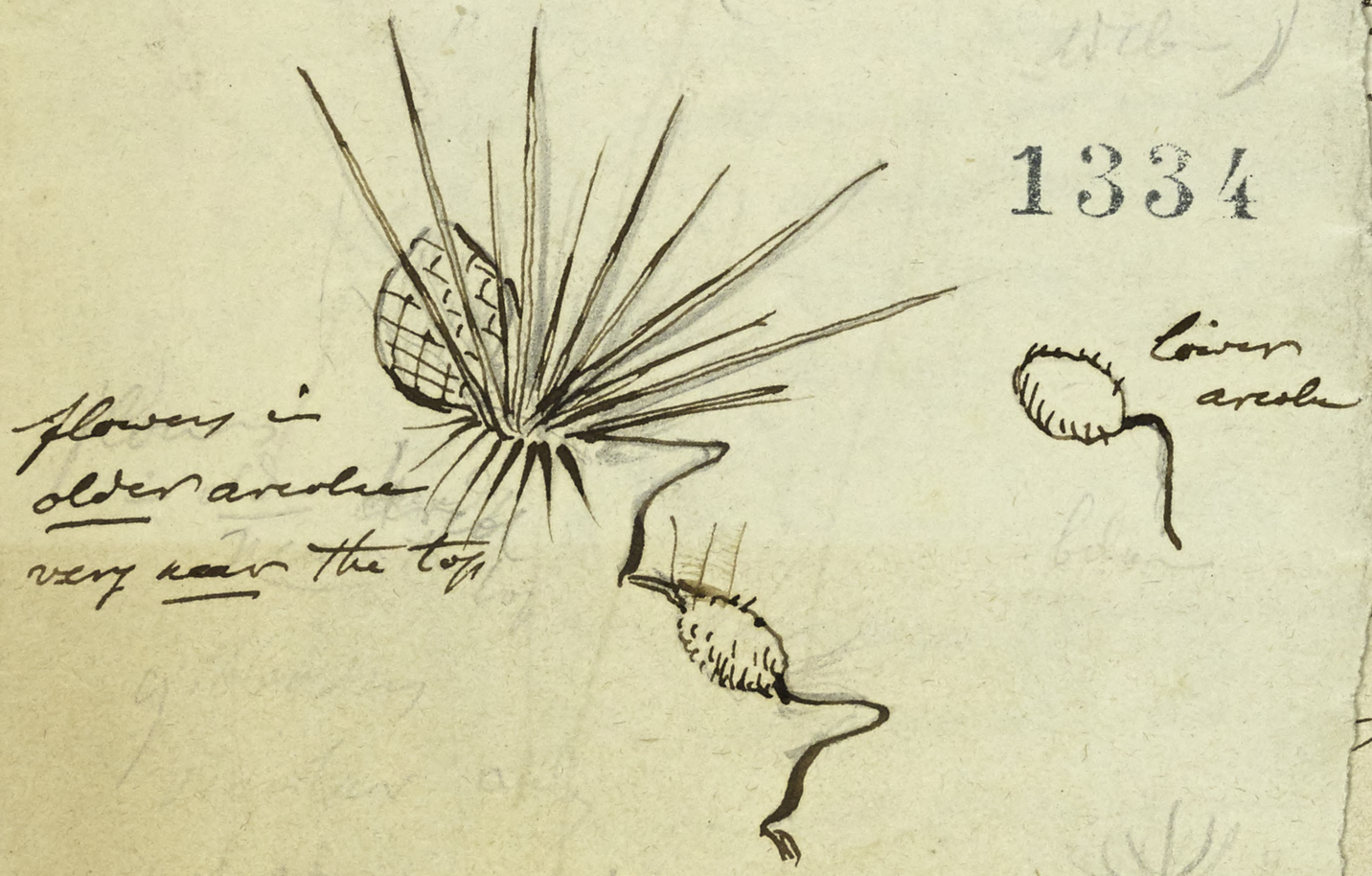
MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS
1333-A

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Echinocactus Gayanus de Gudeney's April 5 1869

(= E. ferocactus fide Weber
& near E. acanthodes.
=

1334



0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

2

~~Carem~~ ?

Hort ~~Academy~~ Petersburg, ~~Obtined~~ 2/4 69

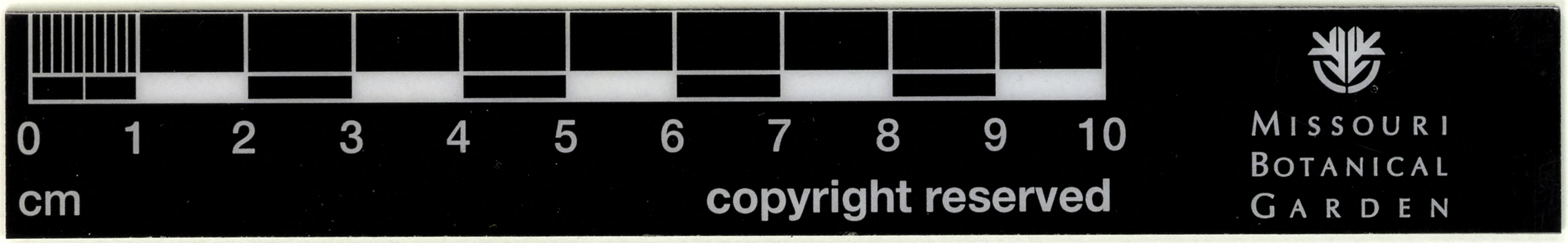
Echinocactus? acutissimus (e Gayaner, fide urbe)

areolae oval, with many inner and outer spines perhaps 25 or more, central one rarely to be distinguished from radiis, ~~Cact~~ rather stouter,

flowers red.

near . exsculptus (urbe)

1335



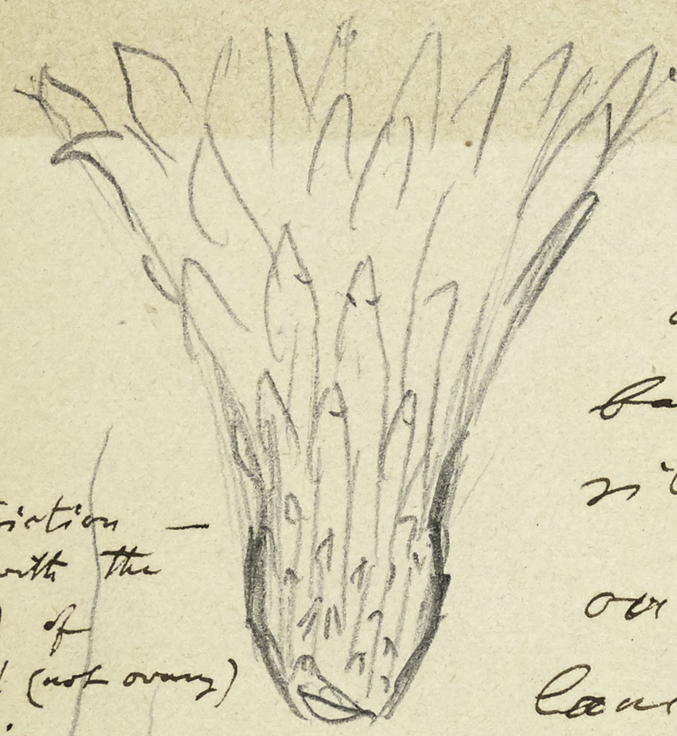
MISSOURI BOTANICAL
GEORGE ENGELMANN

MISSOURI BOTANICAL GARDEN
0 1 2 3 4 5 6 7 8 9 10 cm
copyright reserved

3

Echinocactus acanthissimus Hort Pfersdorff
Paris April 2 1869

1336



flower 1 3/4 inches (45 mm) long
deep rose colour;
ovary & tube ribbed from adnate
bases of sepals, in 8/21 order - 21
ribs easily distinguished
on ovary 10-12 scales
leaves subulate (1/2 - 2 mm long,
with axillary wool;
about 35-45 number of exterior sepals
of tube 2-3 mm long with cottony wool
and soft 1-2 mm long white bristle & scales -
base long ovate
15-20 inner petaloid sepals oblong linear
obtuse or mucronate, entire
about 15 outer longer petals, longer
the sepals & inner petals - mucronate,
denticulate and 15-20 inner petals
shorter, lanceolate denticulate acute,
inner most shortest and palest
ovary transverse
camera large, spherical, 6 mm
& all directions
bases of innermost lowest stamens
nearly closing it upwards
stamens part of tube 9 mm long, stamens
9-11 mm in long
style shorter the petals, longer the stamens
with 8 obtuse pale yellowish stigmata

this constriction — corresponds with the upper end of camera! (not ovary) see section

x4 x4

ovarian sepal | sepal of tube

section x2

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

240-243
1831

Echinocactus bicolor Galeotti.

(Pl. 25.)

La plante, que j'ai décrite d'après un bel exemplaire de la collection de feu Mr. Fennel, a été introduite du Méxique par Mr. Galeotti, qui lui a donné le nom de bicolor, probablement pour désigner la disposition singulière des couleurs de la fleur. Elle est encore très râre dans les collections.

La tige est d'une forme assez régulièrement pyramidale, un peu déprimée au sommet; sa couleur est d'un vert foncé. Elle a 8 côtes un peu comprimées et comme divisées en tubercules par des sillons transversaux entre les aréoles. Les interstices des angles sont larges, profonds et anguleux. Les aréoles se trouvent sur le sommet des tubercules, elles sont allongées en haut et garnies de laine blanche. Le nombre et la position des aiguillons sont très variables, cependant il me paraît, qu'à l'état régulier & complet il y a 9 aiguillons extérieurs, fort étalés, de forme aciculaire, assez roides, de couleur pourprée en naissant, plus tard blancs. Au centre je remarque dans les aréoles les plus développées 4 aiguillons, dont le supérieur est un peu aplati, de substance presque foliacée, semblable à celui de l'Ech. phyllacanthus; les 2 aiguillons suivans sont roides, érigés aux deux côtés du premier, le quatrième, qui est le plus long et le plus fort, occupe le centre de l'aréole; il est légèrement courbé.

Je regrette de n'avoir pas été à même d'observer la fleur de cette espèce, étant alors absent de Cassel. Ainsi je n'en saurais rien dire de particulier; seulement je suppose, que les couleurs du tube et de la corolle (en général très exactes dans les dessins du peintre, qui l'a coloriée d'après nature) sont un peu trop marquées, et que probablement il y aura un passage moins brusque entre le vert clair du tube et le pourpre noirâtre des feuilles périgoniales externes.

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Echinocactus bicolor.

(Taf. XXV.)

MISSOURI BOTANICAL GARDEN.

Echinocactus bicolor Galeotti mss.

E. pyramidalis, saturate viridis, 8-angularis; sulcis profundis, latis, angulatis; costis compressis, sulcis transversis in tuberculos singulos approximatos divisis; areolis approximatis, superne in sulcum continuatis, albido-lanatis; aculeis exterioribus 9 patentibus, nascentibus purpureis, dein albis, acicularibus, rigidiusculis, interioribus 4, summo plano, foliaceo, 2 adstantibus erectis, rigidis, centrali validissimo, longissimo, plano.

Habitat in republica mexicana.

Dieser in den Sammlungen Deutschlands noch sehr seltene Echinocactus ist von Herrn Galeotti aus Mexiko eingeführt worden, und das schöne Exemplar, nach welchem ich die obige Diagnose entworfen, kam im Garten des verstorbenen Hrn. N. Fennel zur Blüthe, leider zu einer Zeit, wo ich nicht in Kassel anwesend war, und daher über die Blüthe nur nach der damals entnommenen Zeichnung berichten kann.

Der Stamm ist ziemlich regelmässig pyramidenförmig, nach oben etwas abgestumpft, dunkelgrün. Seine 8 etwas zusammengedrückten, durch Querfurchen gleichsam in einzelne Höcker getheilten Kanten sind durch breite, tiefe, winklige Längsfurchen getrennt, und tragen ziemlich nahestehende, nach oben in eine Furche verlängerte, weisslich-wollige Areolen. Aus diesen gehen verschiedene Stacheln hervor, deren Normalzahl und Stellung folgende zu sein scheint, obwohl häufige Abweichungen zu bemerken sind. Im Umkreise befinden sich etwa 9 nadelförmige, ausgebreitete Stacheln, die beim Hervorkommen purpurroth, später weiss sind. Zentralstacheln finden sich an den vollständigsten Bündeln 4, von denen der oberste etwas plattgedrückt, fast blattartig ist, die beiden ihm zur Seite stehenden aufgerichtet und steif, der unterste der längste, stärkste und ebenfalls etwas platt ist.

Die Blume ist ansehnlich, purpurroth, die Schuppen der Röhre gross, hellgrün, doch scheint der Uebergang zwischen der Röhre und der Blumenkrone in der Originalzeichnung zu sehr abstechend gehalten zu sein, wenn nicht etwa gerade auf diese Eigenthümlichkeit der von Galeotti der Pflanze gegebene Name sich gründet.

Plant 4 inches high, 4 in diameter 3 ribbed, areolæ on ribbed tubercles, which are separated from one another by transverse grooves. about ½ inch. Above each areole is a deep pit, where old flowers have been — Flowers almost terminal on rather short, covered by very little wool — rather scanty woolly spines 10 radial ¾ inch 4 central, 1 inch one upper pale, 2 compressed red three others brown.

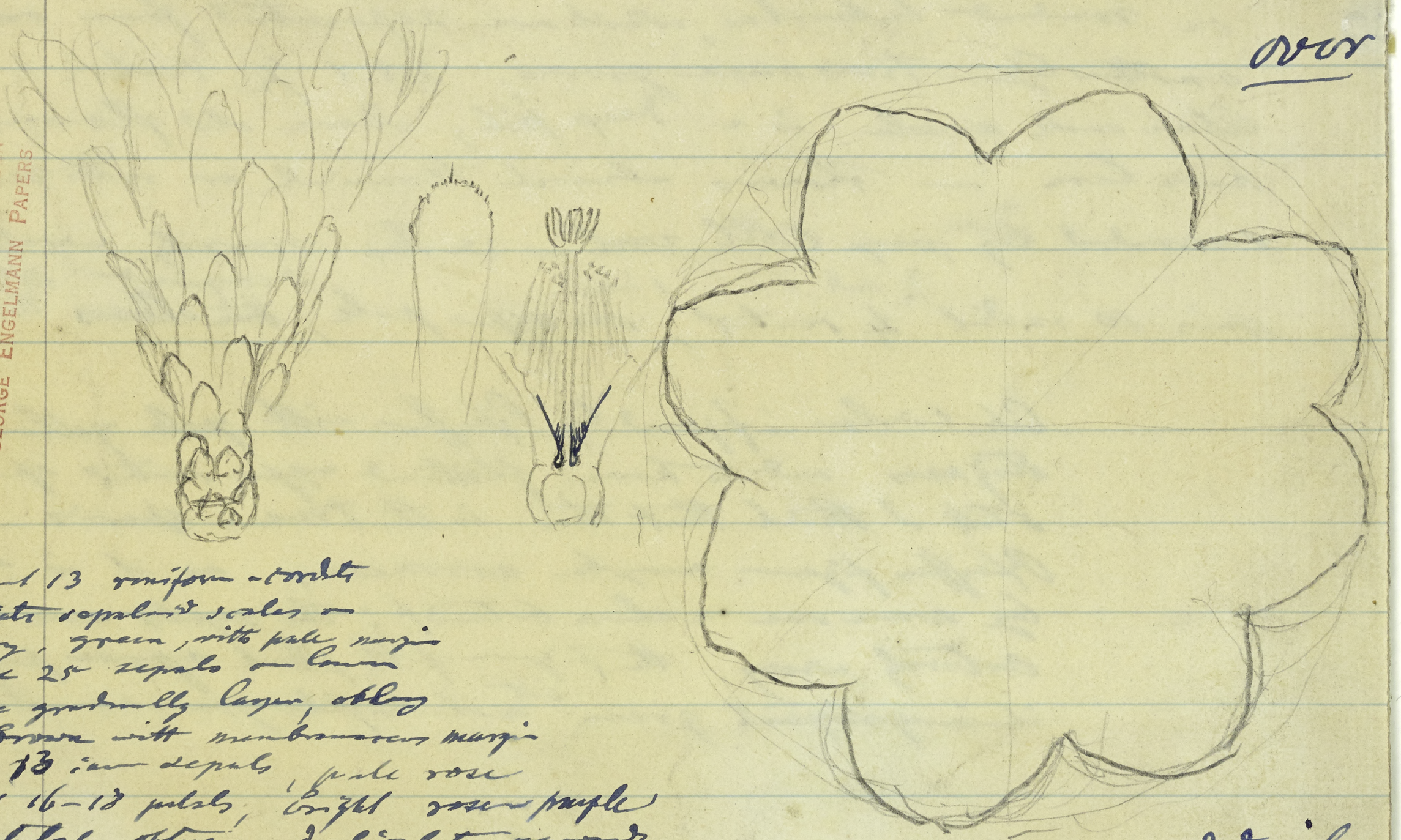
Ach. Cactus is figured by Pfeiffer with pale yellowish stigmas and to have flattened upper central spine — still I think that this is the true species — Pfeiffer figure maybe erroneous as it is made by some one not a botanist; the ribs are also entirely wrong, the figure of the plant appears perfectly ~~this is yellowish~~ but green and bright green as stated.

Echinocereus Scheeri

plant 2½ – 3 inches high and wide 3/

San Luis Potosi, Parry 1879
cult at Shaws June 17 1881

over



Areol 13 uniform-sized
ciliate scarious scales
ovary, green, with pale margin
about 25 sepals in 5 rows
tube gradually larger, oblong
redbrown with membranous margin
10–13 inner sepals, pale rose
about 16–18 petals, bright rose purple
spatulate, obtuse, undulate upwards,
mucronate
ovary 4 lines, nectarial cavity minimal, ½ line
stamens part of tube 6 lines, petals 24 lines
plant 2½ – 3 inches
stem short, very slender plant
style — exsert above stamens 10, Sikkim

8 broad rounded ribs
areole ½ inch apart
wool tubercles, separated
by shallow rose grooves.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Aug. 27 1872.

Fort Col Cambridge, from Saltillo, sent by Parry & Palmer.

Echinocactus bicolor var spinosior ?

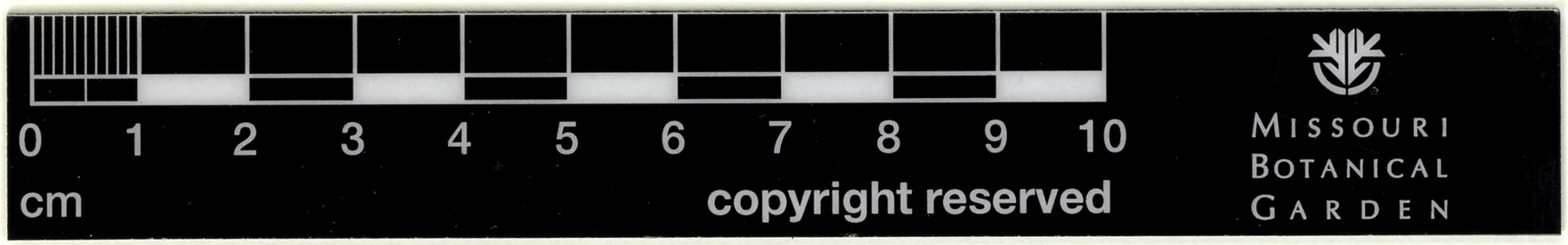
Oval, about 6 inches high, 3 in. diam. 8 ribbed

About 18 radial slender flexible spines 9-12 l. long, about 6 interior ones 15-18 l. long; uppermost one flexible, flat, white; the others stouter, gray reddish and somewhat zygalar

Flower dup rose colour; about 13 cordate, fimbriate ovarian sepals, 30-35 sepals of tube, brown red with whitish or pale rose margins; about 24 inner sepals; about 20 obovate acute, aristulate petals. Nectarian cavity only 1/2 line long, staminate part of tube 6 lines, petals 18 l. long, style longer than stamens, much shorter than petals, 11 obtuse rose coloured stigmas

Seeds in small dry fruit with falls off, openly foliaceous digitiform, with deep hilum cavity, tuberculated, brown

1339



MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Cambridge Bot Gard Aug 19 1882

Echinocactus Grusonii ?

8 ribbed globose, about 3 ½ inches diam
ribs rounded,

1340

areolae
about 12 lines apart, exterior stamens 4–6
lines long, interior 3–4, 8–12 lines
long, purplish mottled, lower ones
erect on the areola or a little deflexed,
the 2 or 3 others almost radiating
upwards:
flower 2 ¾ inches long, 2 inches wide
simple
ovarian scales and those of lower part
of tube uniform – ovate ⌓ ⌓ ⌓
with fringed margins, about 8 on ovary
and about 15 on tube, as many intermediate
and 10 or 12 petaloid on ovary (together upper
scales 36 or 38 on tube)
petals about 30 1½ inches long
3–6 lines wide, deltoid-ovate upwards
and awned bright violet-purple
ovarian ½ inch long globose
tube very short, nectarian cavity
only ½ line; stamens part of tube 6½
lines, stamens 3 lines long; anthers
¼ line,
Style exceeds above anthers, much shorter
than petals; 11 obtuse stigmata 2 lines long
somewhat spreading.

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

1370

S A Wilson 22/3 69

Echinocactus horizonthalonius

fruit soon dry, 2-3

c. mate dry, few seeds, no

wool - opening by circumscission

1341

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

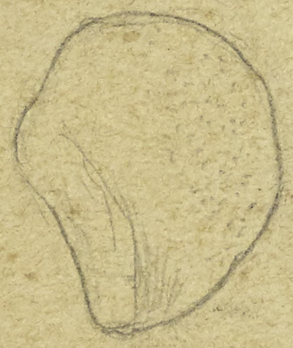
0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Echinocactus, bicolor

E. Palmer, Monterey Mex 1880

April 30 1880

×8

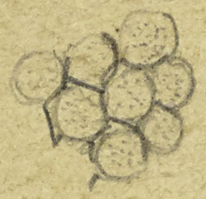


×8

albam
indistinct

cotyledons parallel
as small as in a
Mamillaria

bare elevated
ridges
upon 5- squamate



×60

×150

semina tenuiter octangulata
(areis minutissime scrobiculatis)
s. potius depresso-tuberculata

25-27 radial spines,
2 (or 4) inferior ones
2 lateral longer, flat, white (curved
1 below, shorter, dark hooked

1342

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

H. W. BARKHOEFER & CO.,

DRUGGISTS & PHARMACISTS,

No. 2934 Olive Street, S. E. Corner Garrison Avenue,

ST. LOUIS, MO.

℞

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

cm 0 1 2 3 4 5 6 7 8 9 10
copyright reserved
MISSOURI BOTANICAL GARDEN

Hort Gueldenes Apl 5 89

Echinocactus corrianus, tabularis, cinnabarinus

hyptiacanthus

all have their flowers = a large, wide, circle around the naked vertex, which is more or less depressed, and even infundibuliform, funnelshaped, and is composed of numerous spineless tubercles (properly called the spiny areole) of undeveloped mamillate nibs or mamillae -

1343

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

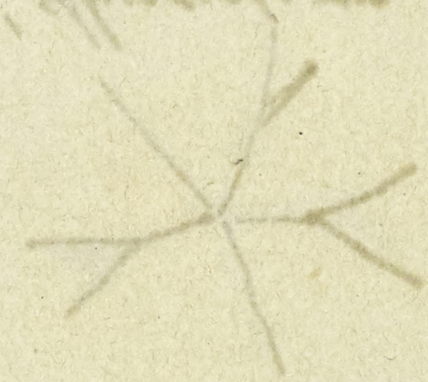
Echinocactus capricornis

seedlings, two years old, from Dr Weber's
at Pfersdorff, Pari Apr 1869

seeds, raised at Pfersdorff, Pari
(Apr 2, 1869) at first 5 angles, but
now they begin (or begun last summer)
to separate into 8 ribs; and accordingly
to phyllotactic arrangement.

1344

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN



MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN HERBARIUM

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Echinocactus capricornis

D W Cbon 22/3 69

globose fruit, 1½-2 cm diam, fleshy, rose purple, with obtuse, clear sepaloid scales terminating in a black spiny point, woolly in axils.

Fruit soon drying up and separating by circumscission from base

1345

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN HERBARIUM

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

Hort Leitz. Berg July 11 1869

Ech. cupreatus, young plants (spirit of the dead plant, mentioned above. plant, Depressed-globose, 1¼-1½ inches diameter, 11-13 ribs, indistinct, tubercles, especially young ones with a long sharp brown (reproducing leaf)

spines usually 6 radial ones, rarely one central slightly curved. — old plant with a stout central spine.

1346

The plant may have come from San Francisco but it is only a surmise by Leitz that it came from Dr Stork and it is most probably chilian or peruvian (and perhaps brought to San Francisco by Dr Bigelow ??)

0 1 2 3 4 5 6 7 8 9 10
cm
copyright reserved
MISSOURI BOTANICAL GARDEN

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS